Service Platform for the Exchange of Services with Developing Countries

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Biography of Presenting Author
Hans-Peter Hutter is Professor in Computer Science at the Zurich University of Applied Sciences (ZHAW). He is the founder and former head of the Institute of Applied Information Technology at ZHAW and leads the Human-Information Interaction research group and the Mobile Usability Lab at the institute. His research activities comprise customer-centered design of mobile application and services, mobile usability as well as advanced user interfaces. His is the project leader of the PESCO project presented in this paper.

Abstract:
This paper presents the new PESCO service platform that offers an Access-To-Market (A2M) and other services to connect farmers in the global south with consumer networks in the global north and setup long term relationships between them. PESCO is the result of a CTI-project of ZHAW, FHNW and gebana AG. The A2M service supports gebana in enabling farmers in developing countries to get access for their products to the fair-trade market in Europe. Interested farmers or NGOs can post their product suggestions to PESCO. After gebana has decided to start the A2M project PESCO supports the communication between the farmers, agents and gebana employees. To that end the agents get a smartphone with the PESCO app that allows them to easily collect the data for the A2M process and exchange it with gebana. PESCO further supports the A2M process in all phases, e.g. to setup a supporting community in the developed countries or by visualizing the status of the project for all stakeholders. PESCO can be a model how producer networks in the global south and consumer networks in the global north can set up long term relationships to exchange products and services in a direct fair-trade manner.

Keywords:
Access to market, service platform, development project

Extended Abstract
gebana is an organic and fair trade pioneer in Switzerland who’s roots go back to the 1970s. It specializes in building and maintaining organic and fair trade supply chains from smallholders in southern countries to consumers in European countries. gebana works with small farmers exclusively because gebana believes that small farmers have an added value to offer, which plantations do not: Smallholder families create ecological, social, and economical values, and there is a market that pays for them.

The business model of gebana is based on two networks, a producer network in the developing countries and a consumer network in the developed countries. gebana has close and long-time relations with producer networks in Brasil, Tunisia, Burkina Faso, and Togo. In this relation, gebana acts not only as an import organization, but as a true partner meaning that it also carries parts of the risks associated with these partners’ activities. All of gebana's producing partners work with small farmers as their sourcing base. As a means of producing added market value, gebana certifies these farmers in organic, fair trade, or other ethical standards. The gebana client network comprises not only wholesale clients, but has been developing a private customer network which now has over 40'000 client contacts and which is constantly growing.

The objective of this project was to develop the service exchange platform PESCO for these networks of gebana where producers and consumers of services from developing countries can meet partners from developed countries to exchange any kind of service e.g. products, know-how transfer, loans, or multi-party development projects. The PESCO platform is professionally moderated by gebana employees in order to build trust and guarantee the quality of service.

The PESCO service platform supports the exchange of services based on the principles of service-dominant logic (Vargo et al. 2008, Vargo 2011). This meant that the PESCO service system (Figure 1) had to be carefully designed so that all service partners get the value out of the service system that they expect. The PESCO platform supports the whole service system with the partners in developing countries lowering as much as possible the cultural, social, technological, and language barriers that these partners are faced with.
The PESCO service platform supports three fundamental services that are crucial for a long term relationships between gebana’s producer networks in the south and the consumer networks in the north:

1. Access to Market service
   This is the main service developed for the producers of bio-farmed products that enables them to get access and establish relationships to a consumer market in the developed countries. It leads them through the whole process of product tests, bio-certification, and setup of the supply chain until a long-term producer-consumer relationship is established. This service two other services needed in different phases of the A2M service.

2. Communication service
   This service is the base for all other services as it enables the service partners in the developing countries to exchange information within their producer community, with gebana, and with other producer and consumer communities. The PESCO platform therefore comprises the PESCO app that enables the service partners in the developing countries (e.g. farmer cooperative or NGOs) to easily exchange information with each other, with gebana, and with other communities.

3. Support service
   This service enables interested people in developed countries to easily get engaged in gebana’s development projects. To that end, the service provides detailed background information about the objectives, the beneficiaries and the context of the project. They then can support the project with money, goods, know-how, and more they can chose from. The objective of this service is not merely fund raising, but establishing a long term relationship between supporters in the north, gebana, and the beneficiaries. To that end, the supporters can also chose from different rewards for their support, e.g. a kilo dried mangos or dates from the beneficiary.

These services were developed in a customer-centered service design process. In the first phase of this process the service customers and stakeholders were identified and their needs, skills, goals and contexts in the south and north were studied with different contextual interviews and focus groups, both, in the developing countries and with gebana customers in the north and with gebana employees.

In the second phase, service innovation, the first step was to analyze the whole service system and the services needed for gebana and its consumer and producer networks in order to setup, build, and maintain a sustainable relationship between the communities in the south, gebana, and those in the north. After that, the jobs and
outcomes of the different service customers were scrutinized in order to identify opportunities for service innovation. In this phase the envisioned Access-To-Market process of gebana was analyzed in detail and the different service needed to support it were identified.

In the service design phase the new service concepts for the identified service needs were designed, prototyped und evaluated with customers and stakeholders in Africa and Europe. From these service concepts the requirements for the PESCO platform and the PESCO app were derived. In different iterations the PESCO platform and the PESCO app were then developed and tested with customers in the north as well as producers and agents in the south to optimally support the designed services.

The resulting PESCO app (Figure 2) and service allows to design all kinds of forms to gather different types of information needed for the A2M process. The agents in the developing countries can easily download the form assigned to them in order to collect the required information from the different farmers the agent is responsible for. The forms comprise different kinds of information i.e. text, choice-lists, pictures, GPS coordinates. The forms can be prefilled with information from the server. Once the forms are downloaded, the agent can work independently of any internet connection. He can fill in the downloaded forms for each farmer but also create additional forms of the same type as needed. The information entered into the forms is first stored on the local device. Once that they are marked to be ready for upload they are automatically uploaded as soon as an internet connection is available. The PESCO server keeps track of all downloaded, pending, and uploaded forms. Each time the mobile device of an agent connects to the PESCO server it checks for new tasks assigned to the agent and downloads the according forms automatically. The first tests with the app in the developing countries are very promising: the app drastically reduces the work for the agents to collect the information and deliver it to gebana. It also helps to increase the quality of the collected data and to manage and monitor the whole data collection process.

The resulting PESCO platform and its services support gebana in setting up, maintaining, and connecting producer networks in the developing countries with consumer networks in the north. This can be a model for the Swiss economy how products and services can be exchanged in a direct and fair-trade manner between networks of producers/service providers and networks of customers. This could be the beginning of a new area of economic relationships between developed and developing countries.

![Figure 2: PESCO App](image_url)
The PESCO service platform will be extended in future to support additional services for the whole PESCO service system in order to further develop and strengthen the producer communities in the global south as well as the supporter and consumer communities in the global north.

This way PESCO supports smallholder farmers in the global south to cultivate their own land in a sustainable but efficient way and build a small business by selling their products not only to the local market but to a much bigger market in the northern countries that values their products as well as their ecological and social contribution. This income and perspective allows these often young farmers to stay with their families and in their villages. By that, PESCO makes a valuable contribution to reduce the risk that these young framers migrate into the towns or even to the north in the hope of getting a better perspective for them and their family’s future.

References
